

International application No.

PCT/US04/22086

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C09K 3/18, 5/00, 5/20; C10M 107/00, 107/36; C12Q 1/02

US CL : 106/13; 252/67, 70, 71; 435/1.3, 41; 508/110, 216, 219

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 106/13; 252/67, 70, 71; 435/1.3, 41; 508/110, 216, 219

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,117,214 A (PARKS et al.) 26 September 1978, abstract, col. 3, lines 1-47, Tables and the claims.	17, 19, 21 and 25-28
X	US 4,388,203 A (NIMERICK et al.) 14 June 1983, abstract, col. 2, line 48 - col. 3, line 30, Examples and the claims.	1-2, 10, 13-15 and 26-28
X	US 6,183,664 B1 (KIM et al.) 06 February 2001, abstract, examples and the claims.	1-2, 11, and 26-28
X	US 4,358,389 A (KONIG-LUMER et al.) 09 November 1982, Example 5 and the claims.	1-2, 12, 22 and 25-28
5	US 4,439,337 A (NIMERICK et al.) 27 March 1984, col. 2, lines 49 - col 3, line 15, Example 2, and the claims.	22
X	US 5,261,241 A (KITAHAARA et al.) 16 November 1993, col. 3, lines 30+ and the claims.	23-24
X	EP 437360 A1 (WARNER-LAMBERT COMPANY) 17 July 1991, abstract and the claims.	29
X	JP 05-328859 A (ZH NAGANO-KEN NOKYO CHIIKI KAIHATSU KIKO) 14 December 1993, abstract.	30
X	US 6,368,591 B2 (CHEN et al.) 09 April 2002, claims.	31



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

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later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

4X

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

“Y”

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

07 February 2005 (07.02.2005)

Name and mailing address of the ISA/US
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
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Date of mailing of the international search report

01 MAR 2005

Authorized officer

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INTERNATIONAL SEARCH REPORTInternational application No.
PCT/US04/22086**C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,180,562 B1 (BLUM) 30 January 2001, abstract, col. 11, line 65 - col. 12, line 12, and the claims.	30

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/22086

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☒ Claims Nos.: 20
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐
☐

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/22086

Continuation of B. FIELDS SEARCHED Item 3:

WEST

search terms: ice, hydrocolloid, microorganism, exopolymer, gum, cellulose, curdian, agar, gum, pectin, starch, lubricant, refrigerant